3. There were no significant changes in PaCO2, PH, HCO3-, SaO2 in the control group ($P>0.05$); there were significant changes in NT-pro BNP ($P<0.05$).

4. There were significant changes in PaO2 in both groups after the experiment ($P<0.05$), there were no significant changes in NT-pro BNP, PH, PaCO2, HCO3-, SaO2 group ($P> 0.05$).

5. There were no significant changes in Na+, K+, Cl-, Ca2+ concentration and creatinine.

CONCLUSIONS This study shows that inhaled furosemide for heart failure patients improve hypoxemia and dyspnea have a role in the degree of reduction. To reduce cardiac wall tension, decreased plasma levels of NT-pro BNP is not helpful. Study of inhaled furosemide serious adverse event occurred, it has a good safety.

GW26-e5448

A simple score model to predict 30-day in-hospital mortality in patients with acute decompensate heart failure at admission only by patients' age and comorbidities

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OBJECTIVES More and more patients with acute decompensate heart failure(ACHF) appear in hospitals. How to estimate in-hospital mortality and stratify these patients become very important, but simple and easy to handle approaches are few. The article tried to develop a practical score model.

METHODS A total of 6,949 patients were identified from the hospital database. The patient whose hospital stay was over less than 30-day were included. The basic characters, all kinds of co-morbidities and all cause deaths in hospital within 30-day were recorded from the patients' medical file.

All co morbidities that co-existed in patients were collected. Percentages were reported to describe categorical variables, mean ± SD to describe the continuous variables. The variables that associated with 30-day in-hospital death were pick out by univariate analysis from the candidate variables, and were included in a multiple logistic regression model as predicting covariates. Age and nine co morbidities were correlated with the 30-day in-hospital death and became valuable predictors. Score rulers for the 30-day in-hospital mortality came from logistic regression by a regression coefficient-based scoring method. A patient 30-day in-hospital death risk could be estimated by his general score which could be gotten by summing the score of each predictor the patient had. Categorical variables were compared using the $\chi 2$ test, and the continuous variables were compared among the 5 groups using 1-way analysis of variance followed by the post hoc Bonferroni multiple comparisons test. The discrimination of this model was valued by the area under receiver operator characteristic curve (AUC). All statistical tests were performed using SPSS 16.0 for Windows (SPSS Inc., Chicago, Inc.).

RESULTS 6,949 patients were included. There were totally 19 comorbidities were collected. The 30-day in-hospital mortality of patients with ADHF was 5.4%. There are nine comorbidities: the COPD, stroke, renal failure, cirrhosis of liver, myocardial infarction (MI), pneumonia, gastrointestinal bleeding and multiple organ dysfunction syndromes (MODS) and age older than 65 years are the independent risk factors of the 30-day in hospital death. According to his total score, a patient could be stratified into very low, low, moderate and high death risk grade.

The power of the score mode was assessed by the area under the receiver operating characteristic curve (AUC), the AUC of the score is 0.778, 0.122 larger than using comorbidities directly.

CONCLUSIONS By the model the estimation of 30-day in-hospital mortality in patients with ADHF could be gotten only by patients' age and comorbidities at admission at once.

GW26-e0183

Study on change in levels of HMGB1, TNF-α, Chemerin in Patients with Congestive Heart Failure And Its Relationship with ventricular remodeling

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OBJECTIVES To study the change of serum high mobility group box 1 protein (HMGB1), tumor necrosis factor-α (TNF-α), Chemerin and its relationship with ventricular remodeling in patients with congestive heart failure(CHF).

METHODS A total of 74 consecutive patients with CHF (36 cases of cardiac function levels II, 38 cases of levels III) and 27 healthy subjects with matched age and sex were enrolled. The levels of HMGB1, TNF-αand Chemerin were measured by ELISE. Left ventricular ejection fraction(LVEF) from echocardiography and left ventricular mass index (LVMI), mean wall stress (MWS) was calculated.

RESULTS LVEF in patients with CHF were lower than that in healthy subjects (40.23±11.56)% vs (68.73±7.05)%, the levels of HMGB1, TNF-α, Chemerin and LVMI, MWS were on the contrary [(27.38±6.81) pg/ml vs (9.52±1.82) pg/ml, (86.45±9.13) ng/L vs (25.26±5.23) ng/L, (267.53 ±31.05) ng/mL vs (123.87±24.74) ng/mL, (184.4±12.1) vs (76.9±8.7)g/m^2 and (439.6±27.9) vs (223.5±19.7) dynes×10^3/cm^2, all $p<0.01$ respectively]. With the increase of NYHA and development of disease, the levels of HMGB1, TNF-α, Chemerin and LVMI, MWS significantly increased; and the levels of HMGB1, TNF-α and Chemerin were positive correlation with LVMI and MWS ($P<0.01$). but a negative correlation with LVEF ($P<0.01$).

CONCLUSIONS Change of the levels of serum HMGB1, TNF-α, Chemerin and LVMI, MWS in the patients with CHF can reflect impairment of the cardiac function and the degree of ventricular remodeling. Increasing in the levels of serum HMGB1, TNF-α, Chemerin and MWS is earlier than the pathologic structural change of left ventricular remodeling.It is suggested that change of the levels of HMGB1, TNF-α, Chemerin and LVMI, MWS play a role in the pathophysiological and pathogenetic mechanism of chronic heart failure, they may interact and influence each other and lead to ventricular remodeling.

GW26-e2326

The effect of serum N-terminal pro-brain natriuretic peptide(NT-proBNP) and QTc interval dispersion in the diagnosis of CHF and evaluation of heart function

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OBJECTIVES By observing the relationship between serum N-terminal pro-brain natriuretic peptide (NT-proBNP) concentration, QTc interval dispersion (QTcd) and the NYHA heart function classification, left ventricular ejection fraction (LVEF), we study the effection of NT-proBNP and QTcd in the diagnosis of CHF and evaluation of heart function.

METHODS We select 84 hospitalized patients with CHF disease and 60 healthy controls from 2014 March to December in our hospital.The serum NT-proBNP concentration was measured by immune chemiluminescence method.QTc interval was detected by Mortara 12 lead ECG ELI250, LVEF was determined by America HP5500 type color echocardiography, heart funtion in patients with CHF was classified according to the NYHA.

RESULTS The mean serum NT-proBNP concentration in patients with CHF (323.38±16.41) pg/ml and QTc interval dispersion (42.84 ±4.16) ms was significantly higher than that in healthy controls (44.87±6.20) pg/ml, 23.35± 3.00) ms, there were statistically differences $P<0.01$. There was a positive correlation between serum NT-proBNP concentration and QTc interval dispersion ($r=0.817$, $P<0.01$). There was a significant positive correlation between NYHA classification and NT-pro BNP concentration, QTc interval dispersion ($r=0.834$, $P<0.01$), ($r=0.830$, $P<0.01$). There was a significant negative correlation between LVEF and NT-proBNP, QTc interval dispersion ($r=-0.770$, $P<0.01$), $r=-0.810$, $P<0.01$). The analysis of effects of NT-pro BNP, QTcd in the diagnosis of heart failure by employing the receiver operating characteristic(ROC) curve led to the result that the area under the curve AUC were 0.806 and 0.712,95% respectively and confidence interval were 0.737-0.875 and 0.603-0.822, respectively with the existence of statistical difference. The diagnostic cutoff value respectively was 128.45pg/ml,42.3ms; the Youden index which was the highest, respectivelywas 0.807,0.706.

CONCLUSIONS NT-pro BNP and QTc interval dispersion can be objective and accurate assessment of heart function in patients with chronic congestive heart failureNT-pro BNP and QTc interval dispersion have ideal sensitivity and specificity in diagnosis of heart failure NYHA classification and left ventricular systolic dysfunction and can be used as a laboratory marker of clinical diagnosis and heart failure degree evaluation.

GW26-e2439

Based on clinical studies of plasma NT-proBNP for the diagnosis of diastolic heart failure optimal cutoff value observed

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OBJECTIVES To investigate the relationship between high blood pressure in patients with plasma NT-proBNP and diastolic heart